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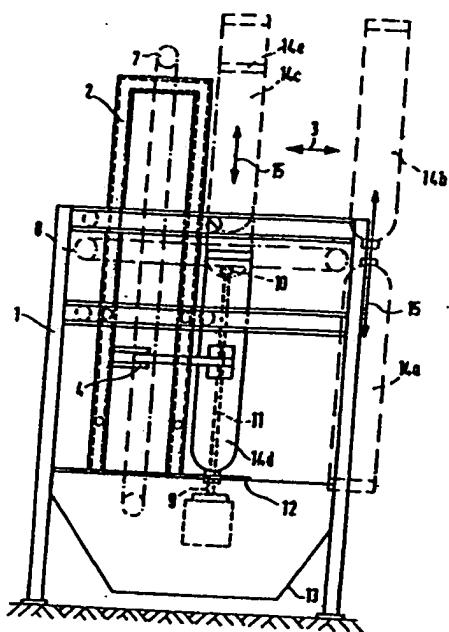
TI - Process and device for internally cleaning compressed-gas cylinders  
AB - The long-term stability of gas mixtures of high accuracy and purity, and the quality of highly pure gases, have to meet increasingly stringent requirements. This means that the compressed-gas cylinders, either new or used, serving for storage must always be carefully cleaned. With the conventional mechanical cleaning processes, trace impurities often remain, and these have adverse effects on the analytical values. In order to improve the quality of internal cleaning, this is carried out with high-pressure water which is ejected by a rotary nozzle (10) arranged on a lance (11).

<IMAGE>

PN - DE3531697 A 19870312  
AP - DE19853531697 19850905  
PR - DE19853531697 19850905  
PA - MESSER GRIESHEIM GMBH (DE)  
IN - SCHMIDT SIEGBERT (DE); GILLNER DIETLIND (DE); ZASTROW HERWART (DE)  
EC - B08B9/08D4  
CT - US2972996 A [ ]  
CTNP - [ ] DE-Z.: Chemie-Ingenieur-Technik, 1982, H. 1, S. A10;  
- [ ] DE-Z.: Brauwelt, 1983, H.14, S.527-529  
DT - \*

WPI

TI - Cleaning system for inside of compressed gas bottles - removes residual trace impurities by high pressure water through rotating nozzle  
AB - DE3531697 The inside face of the compressed gas bottle is cleaned by high pressure water sprayed out from a rotating nozzle (10) attached to a lance (11). The bottle is held by hydraulically operated tongs (4) which have centring jaws (5). The tongs rotate 180 deg. about their longitudinal axis and can move vertically in a framework (1) and horizontally in the longitudinal, direction from the centring area.  
- The rotary drive (9) for the lance and rotating nozzle is provided beneath the centring area. The rotating nozzle is pref. mounted near the base of the gas bottle which is set with its opening downwards.  
- USE/ADVANTAGE - A more intensive cleaning of the inside of the bottle can be achieved whereby the quality of the gases stored is improved. (1/3)  
DEAB - DE3531697 A used cylinder for pressurised gases is cleaned internally by a high-pressure stream of water, together with necessary additions such as detergents or reduction agents. The cylinder gripped by hydraulic clamps and automatically centred in a frame, is lowered with its end downwards onto the end of a lance raised to near the cylinder base, then rotated at high speed with its emerging jet.  
- The lance tip is progressively moved towards the outlet end of the cylinder, which can be rotated through 180 deg. The water is pref. heated.  
- ADVANTAGE - The cylinder is effectively cleaned, despite a narrow inlet. The cleaning liq. readily discharges. (5pp)  
PN - DE3531697 A 19870312 DW198711 005pp  
- DE3531697 C 19890126 DW198905 000pp  
PR - DE19853531697 19850905  
PA - (MESG ) MESSER GRIESHEIM GMBH  
- (MAAS ) WOMA-APP MAASBERG CO GMBH W  
IN - GILLNER D; SCHMIDT S; ZASTROW H  
DC - P43  
IC - B08B9/08  
AN - 1987-073502 [11]



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